R E P O R T R E S U M E S

ED 012 008 AL 000 040

INTERROGATION IN ENGLISH AND MANDARIN CHINESE.
BY- ELLIOTT, DALE E.
OHIO STATE UNIV., COLUMBUS, RESEARCH FOUNDATION
REPORT NUMBER POLA-11-2 PUB DATE JUN 65
EDRS PRICE MF-$0.18 HC-$2.60 65P.

DESCRIPTORS- *ENGLISH, *MANDARIN CHINESE, *SYNTAX, *CONTRASTIVE LINGUISTICS, LINGUISTIC PATTERNS, PROJECT ON LINGUISTIC ANALYSIS, QUESTIONS, INTERROGATIVE STRUCTURES, COLUMBUS

THE PAPER ANALYZES, FROM THE GENERAL POINT OF VIEW OF TRANSFORMATIONAL THEORY, THE GRAMMAR OF INTERROGATIVE SENTENCES IN AMERICAN ENGLISH AND MANDARIN CHINESE. SEVERAL TYPES OF QUESTIONS ARE RECOGNIZED IN EACH. BOTH LANGUAGES HAVE INTERROGATIVE-WORD QUESTIONS, DISJUNCTIVE QUESTIONS, TAG QUESTIONS, AND NEGATIVE QUESTIONS. "YES-NO" QUESTIONS IN ENGLISH AND SOME "MA" QUESTIONS IN CHINESE ARE EQUIVALENT SEMANTICALLY AND GRAMMATICALLY TO POSITIVE-NEGATIVE DISJUNCTIVE QUESTIONS. THE SEMANTIC NOTION OF THE PRESUPPOSITION TO A QUESTION IS DISCUSSED IN RELATION TO EACH QUESTION TYPE. (IT)

ED012008

DOCUMENTS OF THE PROJECT
ON LINGUISTIC ANALYSIS

RF Project 1685 - 4

THE OHIO STATE UNIVERSITY

RESEARCH FOUNDATION

1314 KINNEAR ROAD COLUMBUS, OHIO 43212

Project on Linguistic Analysis
Report No. 11

ENGLISH AND MANDARIN CHINESE:
DEFINITE AND INDEFINITE DETERMINERS
AND MODIFYING CLAUSE STRUCTURES
Sandra S. Annear
Division of Linguistics

INTERROGATION IN ENGLISH AND
MANDARIN CHINESE
Dale E. Elliott
Division of Linguistics

ON THE NOTION OF 'EQUIVALENT
SENTENCE STRUCTURE'
Charles J. Fillmore
Division of Linguistics

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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June 1965
NATIONAL SCIENCE FOUNDATION
Grant No. GN-174

INTERROGATION IN ENGLISH AND MANDARIN CHINESE

D. E. Elliott

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I. INTRODUCTION

This paper will analyse, from the general point of view of transformational theory,[1] the grammar of interrogative sentences in American English and Mandarin Chinese. The English is the dialect of the writer, which is the standard Midwestern variety. The information concerning Chinese was taken from several informants who, though not all native speakers of Mandarin, are fluent in the general Northern dialect of Chinese spoken around Peking.

Roughly speaking, several types of questions may be recognized in each language. Both languages have interrogative word questions containing words such as <u>who</u> and <u>what</u> in English, and the equivalents <u>shéi</u> and <u>shénme</u> in Chinese.[2] Both languages have disjunctive questions such as:

1) Are you going to the library or aren't you?
   Nǐ dào túshūguǎn qù háishi bù qù?
   You to library go or not go?

2) Are you going to see a movie or are you going shopping?
   Nǐ qù kàn diànyǐng háishi qù mǎi dōngxi?
   You go see movie or go buy things?

Chinese has a particular type of positive-negative disjunctive question called "A-not-A" questions.[3] For example:

3) Are you busy?
   Nǐ máng bu máng?
   You busy not busy?

English has what are sometimes called "yes-no" questions, for which the Chinese equivalent is the particle question, usually containing the interrogative particle ma (嗎).

4) Did he come?
Tā lái le ma?
He come ASPECT MA?

In addition, there are at least three other types of question in each language. These are tag, negative and emphatic questions. Examples of the first two are:

5) You're going home now, aren't you?
Nǐ xiànzài húi jiā, shì bu shì?
You now return home, is not is?

6) Aren't you going home now?
Nǐ xiànzài bu húi jiā ma?
You now not return home MA?

(It will be noted later that the Chinese tag question is grammatically different from the English.) In both languages, several different parts of a question may receive emphasis in an emphatic question. This type of question is interesting and important, but it will not be treated here.

What follows will be a discussion of the various syntactic and semantic problems which have come to light during the grammatical analysis of these interrogative sentences. Following certain very recent developments in the theory of grammar,[4] an attempt will be made to show the interrelationships between the syntactic and semantic components of that part of the grammar which is concerned with interrogation. In working with interrogation, one is led very naturally into areas of the

grammar other than interrogative sentences. Problems of this sort will be at least touched upon as they arise.

II. QUESTION WORD QUESTIONS

In both English and Chinese, question-word questions (sometimes referred to as WH- questions in English and SH-questions in Chinese) are those in which some particular grammatical constituent is questioned. (Grammatically speaking, a constituent is questioned when a question-marking morpheme is attached to it. Semantically, a question means that the speaker is asking the hearer to provide some information about the questioned constituent.) In both languages, the "questionable" constituents appear to be numerous.

ENGLISH		CHINESE
who	Human noun	shéi
what	Non-human noun	shénme
which	Definite determiner	nǎige
what	Indefinite determiner	shénme
how many	Numbers	jǐge/duōshaoge
where	Place words	nǎr/nǎlǐ
when	Time words	shénme shíhòu
how	Adjectives and Adverbs of Manner	zěnmeyàng
why	Adverbs of Reason	wèi shénme

In previous grammars, questions containing these words were derived by questioning some arbitrary realization of the

relevant grammatical constituent. For example, the following rule is given by Lees:[5]

$$\frac{X}{1}\left[\frac{\text{(Prep.) Noun (Post-nom. Mod.)}}{\text{Adverb}}\right]\frac{Y}{3} \rightarrow \text{WH-} + 2 - 1 - 3$$

There are reasons for not accepting this sort of derivation for WH- (or SH-) questions. Discussion of these reasons requires consideration of various abstract and far-reaching notions in the theory of grammar. In recent work on this subject,[6] an important distinction has been made between "deep" or "underlying" grammatical structure and "surface" structure. The former is the output of the base component of the grammar containing context-free phrase-structure rules and the dictionary. The latter is the output of the transformational component, which in this model contains only obligatory and stylistic rules, and is the input to the phonological component. In formulating a conception of grammar which incorporates both syntactic and semantic information, one must consider the problem which of the set of phrase-markers assigned to a particular string the mechanism of the semantic component will operate on.

There are convincing arguments,[7] for requiring that semantic rules operate exclusively on underlying p-markers. There are pairs of sentences, no doubt in every language, whose underlying structures are the same or similar but whose surface structure is quite different, and, on the other hand, there are pairs of sentences which are superficially similar but basically quite different. An active sentence and its corresponding

passive in English offer an example of the first type; ambiguities such as:

Visiting relatives can be a nuisance

provide an illustration of the second type. If we consider only the surface structure of such sentences, we find no good way of representing, for example, the fact that in the sentences:

The drunk saw a pink elephant

and:

A pink elephant was seen by the drunk

"a pink elephant" is the object of the verb "to see," even though in the second sentence it appears to be the grammatical subject. However, if we obtain our semantic interpretation of the second sentence from its underlying p-marker, this verb-object relationship is discerned and the fact that the second sentence is a paraphrase of the first follows automatically. Further evidence for this conception of the operation of semantic rules is provided by the grammatical operations of permutation, deletion and adjunction.

In a transformational rule to produce WH- questions such as the one cited above, a question-marking morpheme WH- is adjoined to the constituent to be "questioned" and this constituent is moved to the front of the sentence.[8] Thus sentences such as "He went" or:

> The man we saw sitting next to Mrs. Jones at the concert last Thursday evening came to dinner

will by application of this rule become "Who went?" and "Who

came to dinner?" Now these two pairs of declarative and corresponding interrogative sentences have the same underlying phrase-markers, those of the declarative sentences. The derivational "history" of the two interrogative sentences contains the question transformation rule. Therefore, in providing an interpretation of these sentences, the semantic mechanism of the grammar must look past the derived structure of the interrogative sentences to their underlying p-markers, which are the same as those of the declarative sentences which have not undergone the question transformation. The semantic rules will thus provide the same interpretation for the declarative sentences as for the interrogative sentences. But there is obviously a difference in meaning between these two types. Therefore question rules of the type cited above are incompatible with the requirement that semantic rules operate only on underlying phrase-markers.

The fact that we are now making a serious effort to incorporate semantic information into the total grammar brings us to another reason for desiring a question rule of some form other than the one cited above. One important thing which a theory of language must be expected to account for is the information one may deduce from the sentences he hears. In dealing with interrogative sentences, we must note that the hearer of a question can deduce some information about the opinions or beliefs of the speaker concerning the subject of the question being asked. For example, if the question is:

Are you coming with me or aren't you?

the hearer knows that the speaker believes (obviously but importantly) that either it is the case that the person being asked the question is coming with him, the speaker, or that such is not the case, and furthermore that the speaker has no particular feelings as to which of the two alternatives is the correct one (at least, none which the hearer can discern strictly from the form of the question). More generally, it can be said that when a speaker asks a disjunctive question, he believes that it is the case that one or the other of the disjuncts is true. This is the case where the disjuncts are a sentence and its negation, as above, and also where they are sentences differing in ways other than negation. For example:

Did Mary or Joan go shopping?

or:

Are you going to the movie or to the drugstore?

(The disjuncts in these two questions are read with "list intonation" so that the questions have the sense of "Which of the two persons?" or "Which of the two places?" A different intonation is possible for these two questions. The first one can be read so that it asks whether it is the case that one of the two persons, Mary or Joan, or perhaps both of them, went shopping, or whether it is the case that neither went. Questions with this latter intonation will not be referred to as disjunctive questions. This is indicated by the fact that the disjunctive question cannot itself become one part of another

disjunctive question, but the non-disjunctive question can. Thus *"Did Mary↑ or Joan↓ go shopping, or not?" is not acceptable, while "Did Mary↑ or Joan↑ go shopping, or not?" is. Chao[9] notes that the two interpretations of English disjunctive questions such as this have different Chinese translations.)

This opinion or belief held by a speaker concerning the topic of a question, discernible by the hearer from the form of the question, will be referred to as the "presupposition" of the question. (Presuppositions in non-question-word questions can be positive, negative or neutral, of which more later.) So we have the problem of discovering the presuppositions for question-word questions, that is to say, when a person is asked a question such as "Who did it?" what can he tell from the form of the question concerning the speaker's assumptions about the situation? Now it is apparent that one characteristic of plain WH- questions (as opposed to questions like "Who did it, the butler?") is their lack of specificity or definiteness concerning the answer expected (i.e., concerning the actual semantic content of the answer; there are obvious restrictions on the grammatical structure the answer may have). Therefore, if the question is "Who did it?" the assumption of the speaker is that "it" was "done" by some indefinite human being about whom nothing is specified. If, to obtain the interrogative word <u>who</u> we attached the question-marking morpheme WH- to some arbitrary noun-phrase, the semantic predictions about the presup-

position underlying the resulting interrogative sentence will necessarily be wrong, since the word who is by its nature unspecific.

For these reasons we are led to look for another way of deriving interrogative-word questions. In doing this, we must consider a formal condition, which, according to current evidence, is to be placed on transformational grammars, and which would, in fact, be violated by a rule of the form given above. This is the requirement of "unique recoverability," which is discussed by Chomsky[10] and by Katz and Postal.[11] Briefly, the requirement is that there be one, and only one, unique source for a transformationally derived sentence (excepting, of course, structurally ambiguous sentences). If interrogative words such as who are derived from the attachment of the WH- morpheme to any arbitrary noun-phrase, then an interrogative sentence such as "Who did it?" will actually have infinitely many sources, corresponding to the infinite number of noun-phrases in English. (A sentence generated by such a rule has been spoken of as being "infinitely ambiguous."[12] One feels, however, an evident difference between this type of "ambiguity," and the lexical ambiguity of a word such as bank, or the structural ambiguity of a phrase such as old men and women, where the number of interpretations is finite. Perhaps it would be somewhat better to use the term "unspecific" in the case of question words. This would certainly be more revealing from the point of view of the native speaker who might be questioned about his feelings

concerning a sentence such as "Who did it?" He does not feel that the meaning of this sentence is unclear, as he would for a sentence such as "We drove up to the bank.") So, if we are to conform to this requirement, we must find some method of generating question-word questions such that their sources are uniquely recoverable. We might consider the possibility of making the interrogative words members of the constituent NP, i.e., NP → who, what ... . The primary objection to this is that such a procedure would provide no way of marking the fact that (some) sentences containing interrogative words are in fact questions and not statements. There are reasons for marking all questions by a constituent Q. If this constituent were to be used along with a rule of the form NP → who, the butler ... , a coöccurrence restriction would need to be stated so that the butler could not be chosen in the presence of Q and who could not be chosen in its absence. Furthermore, there are various differences in the behavior of interrogative words and that of other noun phrases which would lead us to suppose that they are generated differently. Interrogative words functioning as objects are (generally) brought to the front of the sentence and "attract" the auxiliary to them. Thus we have:

Whom did you see?

but:

You saw the mailman.

However, we do not have:

*The mailman did you see?

or:

*The mailman you saw.

This fronting cannot simply be considered a property of a certain subtype of noun-phrase, namely, the interrogative words, since in some cases the moving of the question word produces an ungrammatical sentence. For example:

It disturbed him that you did not finish reading the book

but:

*What did it disturb him that you did not finish reading?

In order to determine what these uniquely recoverable sources might be for English and Mandarin, and to see what theoretical problems arise from the differences between them, it will be necessary to describe how the interrogative words are used in the two languages.

Generally, it may be stated that, with some exceptions, those constituents listed in the table above can be questioned, regardless of what method we may choose to accomplish this. Following are examples, in English and Mandarin, of interrogative-word questions:

7) Who asked you to dinner?
Shéi qǐng nǐ chī fàn?
Who ask you eat food?

8) What did you see?
Nǐ kànjiàn le shénme?
You see ASP. what?

9) Which book did you read?
Nǐ niàn le nǎ yìběn shū?
You read ASP. which one-classifier book?

10) What book did you read?
Nǐ niàn le shénme shū?
You read ASP. what book?

11) How many pairs of chopsticks are on the table?
Zhuōzi shang yǒu duōshao shuang kuàizi?
Table on exist how-many pairs chopsticks?

12) Where are you going?
Nǐ dào nǎr qù?
You to where go?

13) When did he come?
Tā shénme shíhòu lái le?
He what time come ASP.?

14) How do you write that character?
Nǐ zěnmeyàng xiě nèige zì?
You how write that-classifier character?

15) How is he?
Ta zěnmeyàng?
He how?

16) Why do you want to study in taiwan?
Nǐ wèishénme yào zài Táiwān niàn shū?
You why want in Taiwan study book?

The grammatical functions of the question words in each language are, of course, more varied than these few examples indicate. Conversely, the surface structure of the examples perhaps indicates more structural dissimilarity between the Chinese and English sentences than is actually present. For instance, in sentence 8), before the noun and the auxiliary in the English sentence are shifted, the structure is roughly the following: You PAST + see WH- + X, which is the same as the structure of the Chinese equivalent. The difference here is in the transformational details required to produce the proper surface structure, rather than in the deep structure.[13] There are, however, differences in the interrogative trans-

formations which may be applied to other equivalent structures.[14] In English, a constituent in a relative clause can be questioned but not "fronted." Thus:

You talked with a man from which city?

but not:

*Which city did you talk with a man from?

In Chinese, a constituent in a relative clause can be questioned in the normal way. The equivalent of this sentence would be:

17) Nǐ gēn yíge cóng shénme chéng láide rén tán le huà?
You with a-classifier from what city come-DE man speak ASP. words?[15]

In English, a constituent <u>modified</u> by a relative clause may be questioned, but this is apparently not the case in Chinese. Thus:

Whom do you know who speaks Chinese?

but not:

18) *Nǐ rènshi shuō Zhōngguo huà de shéi?
You know speak Chinese language DE who?

The Chinese equivalent of this English sentence would be something like:

19) Shuō Zhōngguo huà de, nǐ rènshi shéi?
Speak Chinese language DE, you know who?

This, more literally translated, would be:

Of those who speak Chinese, whom do you know?

Sentences containing interrogative words can themselves function as parts of other sentences. They may occur as the

subject of a sentence:

20) When he will come is still a question.
Tā shénme shíhòu lái hái shi yīge wèntí.
He what time come still is a-classifier question.

as the indirect object of a sentence:

21) Can you tell me who he is?
Nǐ néng bu néng gàosu wǒ tā shi shéi?
You can not can tell me he is who?

or as the direct object of a sentence:

22) I don't know who he is.
Wǒ bù zhīdào tā shi shéi.
I not know he is who.

In trying to find the proper means for deriving these sentences, we may reconsider two points which were made before, one semantic and one dealing with grammatical theory. The former concerns the fact that a hearer can discern from the form of a question its presupposition. The latter is that we require that the derivational "history" of a sentence be uniquely reconstructible. In discussing the concept of a presupposition with regard to interrogative-word questions, it was noted that one feature of such questions is that they are indefinite or unspecific. Now there is in English a group of words generally known as "indefinite pronouns." They include someone, something, and so on. Thus we find that there is in English a group of actual, realizable "words" which are a declarative counterpart to the "indefinite" idea inherent in interrogative-word questions. The native speaker of English intuitively accepts the proposal that the presupposition of the question:

Who did it?

is:

Someone did it

that the presupposition of the question:

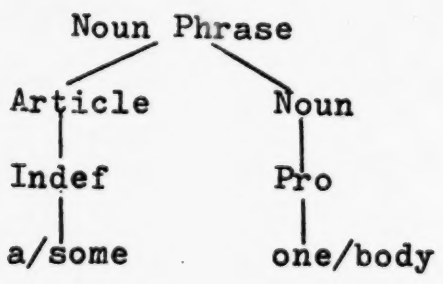
What did you see?

is:

You saw something

and so on, similarly, for many interrogative-word questions. The existence of these relationships leads us to suppose that these "indefinite" words may be the grammatical source of the interrogative words. The generation of question-word questions by this means would provide a unique source for these questions and would provide a syntactic basis for the explanation of the semantic notion of a presupposition as it applies to these questions. This idea has been discussed in some detail by Katz and Postal.[16]

When we consider the same problem in Chinese, we find that nowhere is there any such neat correspondence between the indefinites and the interrogatives. Now, the indefinite words in English are considered to be "pro-forms." The node so labelled is found in the derivation of the indefinite words in a manner something like the following:



This would yield someone or somebody. In English, the indefinite words are the pro-forms of the elements which they represent. In Chinese, the situation is significantly different in that there seems to exist no group of forms readily recognizable as "indefinites" or "pro-forms." Words which are at least homophonous with the Chinese SH- words appear in non-interrogative sentences. Such occurrences of these words have an indefinite character and thus the possibility that the actual interrogative words may be derived from them is worth investigating. These "indefinite" words appear in various types of sentences. One common type is the "lián ... dōu..." construction. (The lián is sometimes omitted.) This is a sort of emphatic construction, best translated into English by various constructions.

23) No one at all is coming.
Shéi dōu bù lái.
Anyone DOU not come.

24) He doesn't read anything at all.
Tā shénme dōu bù kàn.
He anything DOU not read.

25) I didn't give him anything at all.
Wǒ shénme dōu méi gěi tā.
I anything DOU not give him.

It should be noted that this construction is not limited to these words.

26) Even Mr. Li is not coming.
Lián Lǐ Xiānsheng dōu bù lái.
LIAN Li Mr. DOU not come.

27) He doesn't even read the newspaper.
Tā lián bào dōu bù kàn.
He LIAN newspaper DOU not read.

In the "lián ... dōu ..." construction (and elsewhere; see below.) shénme can be used as a sort of determiner.

28) I don't want any book at all.
Wǒ lián shénme shū dōu bù yào.
I LIAN any book DOU not want.

This construction is perhaps more common with negated verbs, but negation is not necessary.

29) He even reads the newspaper.
Tā lián bào dōu kàn.
He LIAN newspaper DOU read.

Shéi, shénme and shénme plus noun can appear post-verbally as non-interrogative words, but only in negative sentences.

30) I don't see anyone.
Wǒ bù kàn shéi.
I not see anyone.

31) He doesn't want anything.
Tā bù yào shénme.
He not want anything.

32) I don't have a(ny) book(s).
Wǒ méi yǒu shénme shū.
I not have a(ny) book.

Without the negative these sentences are definitely interrogative.

Important for the analysis of question-word questions is the fact that there are sentence types containing these and other question words which may be interpreted either as questions or as statements according to the intonation pattern. For example:

33) There is something outside. What's outside?
Yǒu yīxiē shénme zài wàimian. (?)
Exist a-classifier something (what) in out-side.

34) He's eating something. What is he eating?
Tā zài chī shénme dōngxi. (?)
He ASP. eat some (what) thing.

In other sentences, however, these words can be interpreted only as interrogatives.

35) Who is outside?
Shéi zài wàimian?
Who in out-side?

36) What do you want?
Nǐ yào shénme?
You want what?

In the "lián ... dōu ..." sentences, on the other hand, the SH- words are interpretable only as indefinites. In addition, there are other types of sentences where only the indefinite interpretation is possible.

37) I think he left with someone.
Wǒ xiǎng tā gēn shénme rén chūqu le.
I think he with some person went-out ASP.

38) Whoever comes first will eat first.
Shéi xiān lái shéi xiān chī fàn.
Whoever first come whoever first eat.

39) If I see someone, I'll ask him where the restaurant is.
Wǒ kànjiàn shéi, wǒ jiù wèn ta fànguǎr zài nǎr.
I see someone, I then ask him restaurant located where.

40) Buy whatever is cheap.
Shénme pyányì jiù mǎi shénme.
Whatever cheap then buy whatever.

The existence of the above-mentioned ambiguous sentences might suggest the possibility that question-word questions could be derived from corresponding indefinite sentences. However, since there are sentences where the SH- words must be interpreted either as indefinites or as interrogatives, but not as

both, this possibility would seem uneconomical, because it would require the generation of non-existent indefinite sentences in order to produce certain kinds of questions, and, without complicated restrictions, would produce non-existent questions. In addition, there are syntactic distinctions between the SH- words as indefinites and as interrogatives. Although these words after the existential verb yǒu (有) can be interpreted either way, without the yǒu they are only interrogative. SH- words occurring with yīge "a-classifier" are subject to either interpretation, as in:

41) Some sort of animal is outside. What sort of animal is outside?
Yǒu yīge shénme dòngwu zài wàimian. (?)
Exist a-classifier some (what) animal in outside.

Those occurring after demonstratives, however, can only be indefinite.

42) That indefinite-sort-of animal is outside.
Nèige shénme dòngwu zài wàimian.
That-classifier some animal in out-side.

Pertinent to this possibility is the fact that although rén (人) and dōngxi (東西) appear to have indefinite meaning in some instances, as for example:

43) Someone came.
Yǒu yīge rén lái le.
Exist a-classifier person come ASP.

44) There is something on the table.
Zhuōzi shang yǒu yīge dōngxi.
Table on exist a-classifier thing.

the native speaker of Chinese does not give the same sort of indefinite interpretation to other nouns. If we take yīge

rén (一個人) to be a pro-form meaning someone we might reasonably expect yīge dìfang (一個地方) "a-classifier place" to mean someplace and yīge shíhòu (一個時候) "a-classifier time" to mean sometime, but this is apparently not the case. "He went somewhere" is translated:

45) Tā chūqu le.
He go-out ASP.

and "I'll read that book sometime" as:

46) Guò xiē shíhòu, wǒ jiù kàn nèiběn shū.
Pass some time, I then read that-classifier book.

The above discussion indicates that a) there is no naturally identifiable set of indefinite words in Chinese which can be correlated with the interrogatives and b) it is not reasonable to attempt to derive the question words from any forms which do exist.

In their account of the derivation of interrogative word questions in English, Katz and Postal[17] attempt to simplify considerably the analysis of these questions by formulating their rules so that the WH- marker is attached only to the determiner constituent of the noun-phrase, rather than to various nominal, adverbial and other constituents. They make use here of a concept advanced by Chomsky.[18]

> Each major category has associated with it a "designated element" as a member. This designated element may actually be realized (e.g., "it" for abstract Nouns, "some (one, thing)"), or it may be an abstract "dummy element." It is this designated representative of the category that must appear in the underlying strings for those transformations that do not preserve, in the transform, a specification of the actual terminal representative of the category in question.

Katz and Postal propose to use the realized designated elements or "pro-forms" as sources for the question words, associating _who_ with _someone_, _what_ with _something_, etc. These forms are actually considered to be derived from the attachment of the indefinite determiner _some_ to pronouns, such as _one_ or _thing_. Noting that the non-manner adverbial _how_ as in:

How long is the train?

or:

How fast does it go?

are apparent exceptions to the general claim that WH- is attached only to the determiner, they propose that these questions be derived from:

The train is long to some extent

and:

It goes fast to some extent

or some similar sentences. There are various syntactic facts which lend support to this analysis, e.g., the behavior of the word _else_ ("Who else?" and "Someone else" but not *"The man else."). There are other considerations, however, which indicate that an alternative proposal may be desired.

Although it may seem an "elegant generalization" to say that only the determiner constituent may be questioned in English, this statement is not sufficient, since there must be phonological rules to produce the correct interrogative word according to whether the questioned determiner is attached to _one_, _thing_, or some other pro-form. Since further in-

formation is necessary here, in addition to the identity of the determiner, it may be asked whether this analysis is as revealing as one which says that in reality various constituents are capable of being questioned.

Here it is necessary to consider the relationship which exists between an interrogative-word question and the possible forms its answer may take. For example, if the question is "Who did it?," where a noun-phrase constituent has been questioned, the answer cannot be a time-expression, which in turn can be the answer to a question where a time-expression has been interrogated, such as "When did he do it?" Katz and Postal[19] state that:

> S is a possible answer of the question F if S belongs to the set of sentences referred to in the reading assigned to the 'Sentence' node of the leftmost semantically interpreted underlying p-marker of F.

Since the question "Who did it?" derives from the questioning of a sentence of the form "NP did it," the answer must be a sentence of the form "NP did it," where NP has some definite semantic content. (This does not include responses such as "I don't know " or "Who cares?" which are not considered proper answers of the type expected by the speaker asking the question.)

Generally, the answer to a WH- question is the same grammatical form as the presupposition to the question, but with semantic content added to those elements in the presupposition which were questioned. Therefore, the formal definition of the possible answers to a question specifies only

the grammatical category, which, with additional semantic content, will, with the rest of the sentence already present in the presupposition, form the answer. Nowhere is there any a priori need to provide any actual lexical content to this category.

An analysis which provides for the questioning of several types of constituent would make a distinction between those "designated elements" which are realized and those which are not. Every constituent which can be questioned will have as one of its members a "dummy" symbol △. It is this symbol which, in structures containing the Q marker, becomes the interrogative word. The use of this symbol will provide a method of deriving interrogative word questions which is generally applicable to all languages having such questions. Thus we do not need to use some dummy and some actual indefinite forms in a language like Chinese, nor do we need such unlikely English sentences as "The train is long to some extent." This method shows more clearly the relationship between question and answer, and characterizes the intuition that in fact several types of constituent can be questioned, which is obscured by the generalization that only determiners can be questioned.

It is unclear as yet whether, in this analysis, the WH-marker must be retained in non-echo questions. If the dummy marker occurs in structures marked by a Q for some purpose

other than the production of an interrogative word, there must be some way of deciding which dummy elements are to become interrogative words and which are not. If there are no such cases, however, then the WH- marker in non-echo questions is in effect redundant, and need not be used. It appears that regardless of what decision may be made here, the WH- marker will be necessary in at least certain types of echo questions. These questions are not intelligible apart from a previous statement, some part of which is either not understood or not believed, whence the term "echo" question. If the statement-question sequence is:

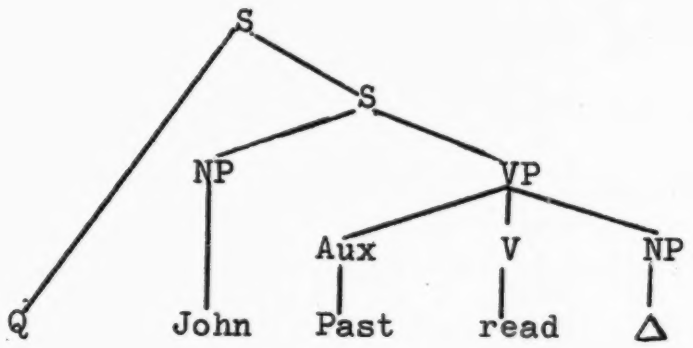
I saw a ghost

and:

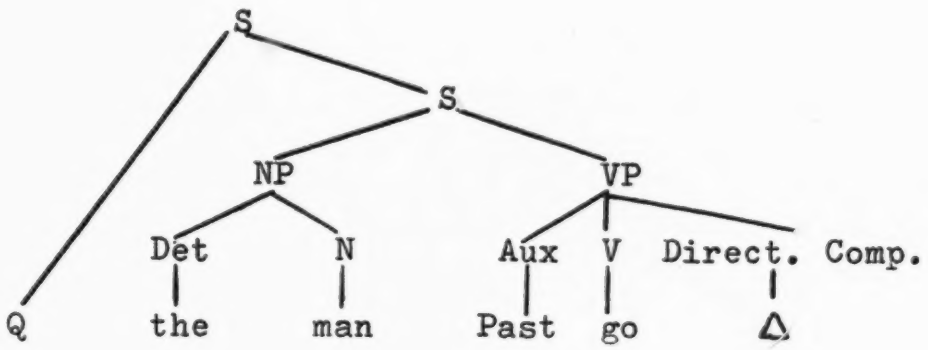
You saw a what?

the interrogative word <u>what</u> may be viewed as having resulted from the questioning of an actual morpheme <u>ghost</u>. Since there may be more than one correspondence of constituents capable of being questioned, there must be some method of marking which constituent or constituents are to be questioned.

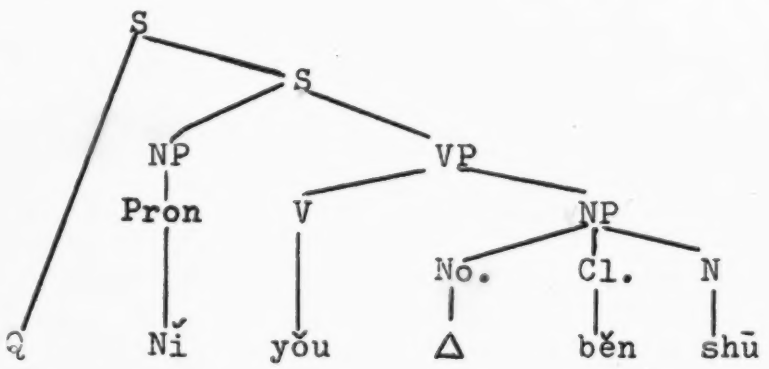
The question transformation to produce interrogative word questions would apply to structures of roughly the form of the following examples:



What did John read?



Where did the man go?



Nǐ yǒu jǐběn shū?

If it is decided to retain the WH- and SH- markers in these structures, they will be attached to the dummy symbol as a consequence of the presence of the Q.

In this analysis, all constituents will have a dummy

marker as one of their members. Only some constituents will have "pro" members, namely, those which have an actually realizable pro-form. The concept of indefiniteness may be expanded in what seems a natural way to include both dummy elements, which are not phonetically realized, and pro-forms, which are. As noted above, there are some similarities in the behavior of indefinites and interrogatives. By subsuming both dummy markers and pro-forms under the concept of indefiniteness, this parallelism can be noted for those languages or segments of a language in which it exists. There is, in fact, at least one instance in English where this parallelism does not hold. This is in a sentence like:

Who are your friends?

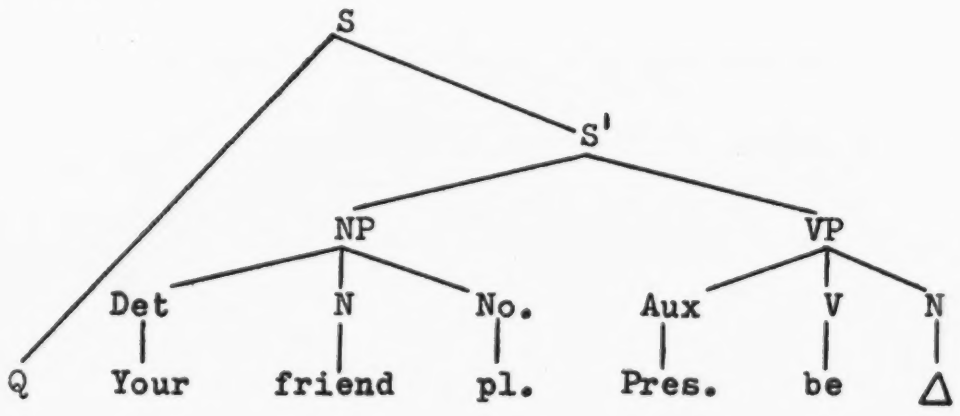
where <u>who</u> is followed by a plural verb and there is no sentence:

*Someone are your friends

or:

*Your friends are someone.

In the above analysis, this question would come from a structure of the form:



III. DISJUNCTIVE QUESTIONS

Disjunctive questions are those in which a choice is offered, implicitly or explicitly, between two or more different sentences, or between a sentence and its negation. The general form of these questions is similar for both English and Chinese. When two different sentences are conjoined, the difference may be very small, or there may be no lexical similarities at all.

47) Are you reading a book or are you reading a newspaper?
Nǐ kàn shū háishi kàn bào?
You read book or read newspaper?

48) Are you going to the bank or has your husband already cashed his check?
Nǐ yào dào yínháng qù háishi nǐ xiānsheng yǐjing qù qǔ le qián le?
You want to bank go or your husband already go take ASP. money F.

Both languages may form a positive-negative disjunction. In Chinese, this is usually called the "A-not-A" question.

49) Are you coming or not?
Ni lái bu lái?
You come not come?

A-not-A questions may be considered a subtype of disjunctive questions with <u>háishi</u> since

50) Are you coming or not?
Ni lái háishi bu lái?
You come or not come?

is possible. They are distinguished by the fact that in

A-not-A questions only two sentences may be conjoined, whereas in other disjunctive questions more than two are possible. In both types, the háishi may or may not appear.

51) Nǐ kàn shū kàn bào?
You read book read newspaper?

The semantic notion of the presupposition to a question, discussed above with relation to interrogative-word questions, is relevant to the disjunctive questions also. However, this notion takes on a somewhat different character in the discussion of each of the various types of questions. When the question is "Who did it?" it was said that the presupposition is "Someone did it." In a question like 47) above, however, the presupposition is something like:

Either you are going to read a book or you are going to read a newspaper.

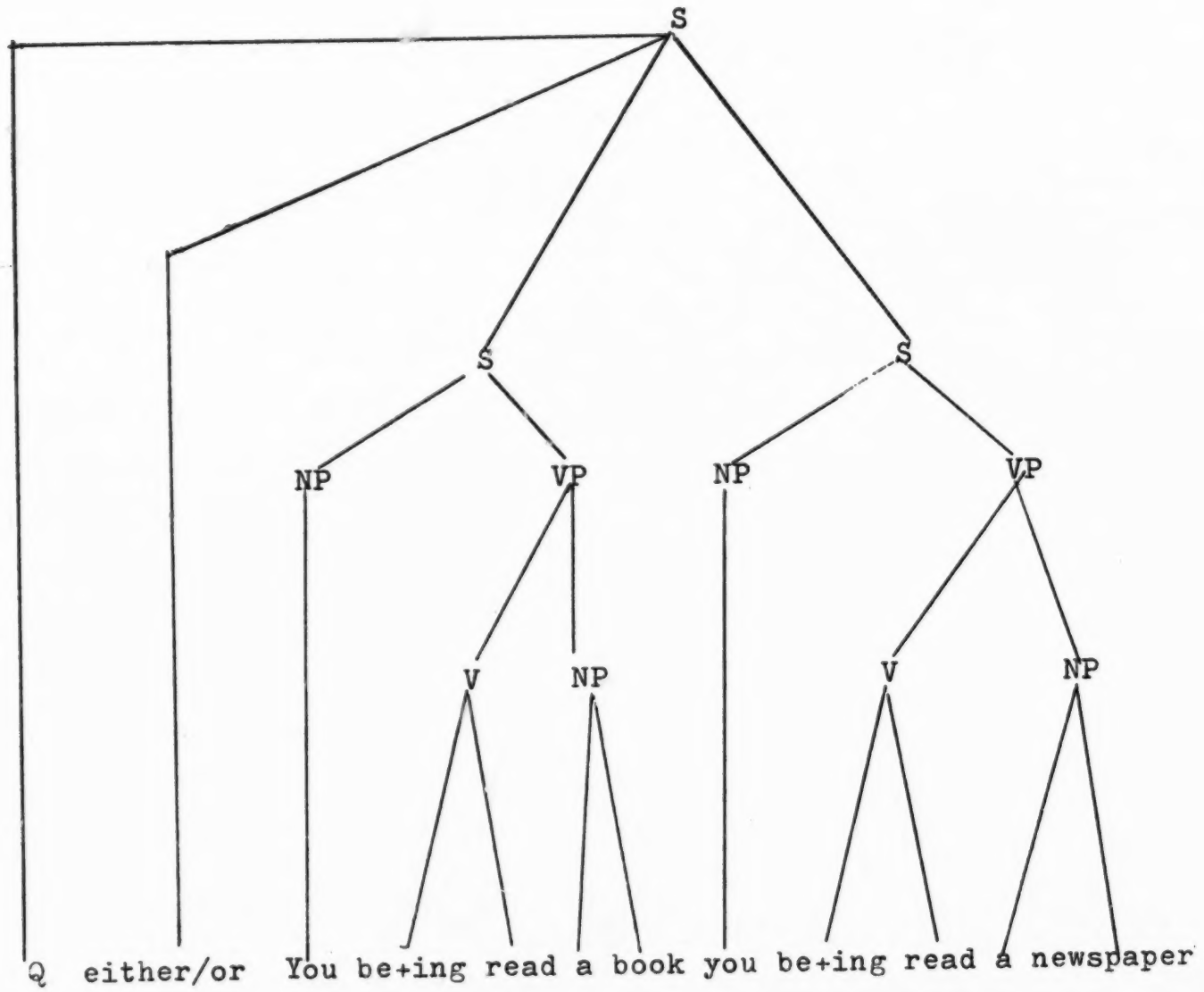
(As was noted above, a question like this can be given an intonation such that it is not interpreted as a disjunctive question.) In the question "Are you coming (or not)?" the presupposition is something like:

Either you are coming or you are not coming.

This may be considered a "neutral" presupposition, i.e., the speaker has no prior feelings that either one or the other of the disjuncts is the true case. (In other types of questions, positive and negative presuppositions will be discussed.)

In both English and Chinese, there exist coördinating conjunctions which allow the formation of sentences cor-

responding to the neutral presuppositions of the disjunctive questions. These are <u>either</u> ... <u>or</u> ... and <u>huòzhe</u> ... <u>huòzhe</u> ... . Disjunctive questions can probably best be viewed as resulting from the questioning of disjunctive statements with these conjunctions. Thus 47) would result from a structure of roughly the following form:



Positive-negative disjunctive questions would be obtained in the same way, except that the disjuncts would be a sentence and its negation.

In both languages, there are possibilities for deletions

in questions formed by the conjoining of two or more sentences. In fact, sentences with deletions are probably more common than those without. This can most likely be best considered simply a way of eliminating redundancy. Thus:

Are you going to the movies tonight or not?

provides a way of avoiding the entire disjunction:

Are you going to the movies tonight or are you not going to the movies tonight?

(There is, of course, more than one possibility for deletion.)

Similarly in Chinese:

52) Nǐ jīntiān wǎnshang qù kàn diànyǐng háishi bù qù kàn diànyǐng?
You today evening go see movie or not go see movie?

can be stated with deletions as:

53) Nǐ jīntiān wǎnshang qù kàn diànyǐng háishi bù qù?
You today evening go see movie or not go?

Likewise here there are other possibilities. (Apparently it is not possible to repeat jīntiān wǎnshang. This is perhaps due to the fact that it is used in Chinese as a sort of sentence adverb. It would probably appear in both sentences in the underlying structure with obligatory deletion. This is also the case with the subject nǐ.)

The English question and the question:

Are you going to the movies tonight?

are equivalent in presupposition. The latter sentence can best be considered a deletion from the former, where the entire negative disjunct has been deleted. (Some complication may be

introduced into the mechanism for deletion by the fact that it is possible to delete from the positive disjunct in positive-negative disjunctions. Thus:

54) Are you or aren't you going to the movies?
Nǐ qù bu qù kàn diànyǐng?
You go not go see movie?

The Chinese equivalent of "Are you going to the movies?" is:

55) Nǐ qù kàn diànyǐng ma?
You go see movie MA?

The fact that this sentence is a question is indicated by the presence of the interrogative particle ma. These particle questions appear to be very different from anything found in English. There is reason to believe, however, that they are not really so different.

IV. PARTICLE QUESTIONS

Questions with the interrogative particle ma in Chinese appear to result simply from the addition of the particle to a declarative sentence. For example:

56) You are well.
Nǐ hǎo.
You well.

becomes:

57) Are you well?
Nǐ hǎo ma?
You well MA?

This could be done by a rule of the form S → NP VP (F), where F would represent a group of final particles including ma (嗎), le (了), ne (呢), etc. A rule of this form will probably be necessary in the grammar, but it should not be used to produce ma questions.

The most important reason for this is that the addition of an interrogative element to a non-negative sentence would yield an incorrect semantic interpretation. Furthermore, there are syntactic reasons for not including all the finals in one group F. Some of the particles may occur with others, e.g.:

58) Did he read the book?
Tā kàn shū le ma?
He read book ASP. MA?

Others cannot coöccur, however.

59) *Tā hái méi yǒu lái ne le.
He still not ASP. come NE LE.

In some sentences one particle may be used but not another.

60) Will he read the book tomorrow?
Tā míngtian kàn shū ma?
He tomorrow read book MA?

61) *Tā míngtian kàn shū le.

For a large group of ma questions, there exists for each question a semantically equivalent A-not-A question. The exceptions are negative ma questions such as:

62) Aren't you going?
Nǐ bù qù ma?
You not go MA?

emphatic questions, where the ma has a high pitch, instead of the usual neutral tone, and questions with certain adverbs such as jēnde (真的) or júedùi (絕對). E.g.:

63) Nǐ jēnde qù ma?
You really go MA?

For positive ma questions, however, there is generally a corresponding A-not-A question. For example, there is no difference between:

64) Are you tired?
Nǐ lèi bu lèi?
You tired not tired?

and:

65) Are you tired?
Nǐ lèi ma?
You tired MA?

or between:

66) Can he speak Chinese?
Tā hùi bu hùi shuō Zhōngguo huà?
He can not can speak Chinese language?

and:

67) Can he speak Chinese?
Tā hùi shuō Zhōngguo huà ma?
He can speak Chinese language MA?

Thus it is reasonable to suppose that, in these cases, where the two question types are interchangeable, there exists a grammatical equivalence between them, in that a positive ma question is a deletion from the corresponding A-not-A question where the entire negative disjunct has been deleted. (This is not to say that a grammatical relationship must be assumed to hold between any two semantically equivalent sentences.)

Ideally, it is to be hoped that the simplest solution to a problem in synchronic linguistic analysis will reflect the historical development of the grammatical situation. It is important here to note that there exists historical evidence in support of the notion that some ma questions and the A-not-A questions are grammatically related. The A-not-A questions may optionally be followed by the particle a (啊), which has only the effect of making the questions sound "less abrupt" to the native speaker. E.g.:

68) Nǐ lái bu lái a?
You come not come A?

According to historical linguists,[20] the particle ma is derived from the negative marker wú (無), which was later replaced by bù (不), which is in use today. It is plausible to say

that this process came about when the right verb phrase in A-not-A questions was contracted up to the negative marker, leaving the marker and the final particle a, which is very common in colloquial speech. A change from [b] to [m] (both labials) is common enough.

It is unclear whether it would be desirable to require the presence of the optional a for the contraction of A-not-A questions in the synchronic description. One possible reason for doing this, though, is that this contraction can take place only with isolated questions or with questions embedded as direct objects in sentence-final position. Thus we have:

69) Tā lái bu lái?
He come not come?

or:

70) Tā lái ma?
He come MA?

and:

71) Do you know if he is coming?
Nǐ zhīdào bu zhīdào tā lái bu lái?
You know not know he come not come?

or:

72) Nǐ zhīdào bu zhīdào tā lái ma?
You know not know he come MA?

and:

73) Whether he will come is still a question
Tā lái bu lái hái shi yīge wènti
He come not come still is a-classifier question

but not:

74) *Tā lái ma hái shi yīge wènti.

The particle a can occur only in final position. Thus saying that the contracted verb phrase includes a offers a reason for saying that the contraction can take place only in isolation or in final position.

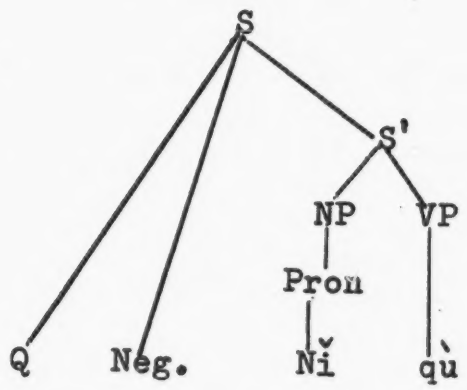
In this way we may explain the origin of positive ma questions by saying that they correspond to and are grammatically related to A-not-A questions. For every A-not-A question there is a corresponding ma question, but there are ma questions without corresponding A-not-A questions. Of primary concern are the negative ma questions, e.g.:

75) Aren't you going?
Nǐ bù qù ma?
You not go MA?

The *presumption* for these sentences is simply the statement left when the ma is removed, e.g.:

76) You are not going.
Nǐ bù qù.
You not go.

This will be called a negative presupposition. For positive ma questions, on the other hand, the presupposition is neutral, corresponding to the neutral presupposition of the A-not-A question. It is important to note that the semantic information necessary to the interpretation of negative ma questions is contained in the negative statement. Therefore, it should be possible to say that a negative ma question results simply from the questioning of a negative statement, as for example:



Nǐ bù qù ma?

The Q marker could then be realized in a negative question as ma (or as a tag; see below). Since it is true, as stated above, that there are no A-not-A correspondents to negative ma questions, it remains to ask how ma came to be used in negative questions, and why some way should not be found of showing a somewhat closer grammatical relationship between the ma particles in positive and negative questions.

Although positive ma questions may have originally resulted from a contraction of the negative verb phrase, the resulting question appears to be a positive statement plus an interrogative particle. Later on the speakers of the language may have formed negative ma questions by the process of analogy. (A consequence of this hypothesis is that negative ma questions were chronologically subsequent to positive ones.[21] Whether this was actually the case has not yet been discovered.)

The derivation of positive ma questions from A-not-A questions in the synchronic description of Mandarin, in addition to reflecting the historical situation and showing the semantic

equivalence of the two types, shows the neutral presuppositions of these questions, which are actually present in the full non-contracted form. Since the presupposition of a negative question is present in the negative statement, it is not necessary to suppose that negative ma questions must be derived by some sort of contraction. Furthermore, the historical evidence indicates that the two should be handled differently.

V. TAG QUESTIONS

Both English and Chinese have tag questions, and the semantic function of the tag is the same in both languages. It indicates that the speaker expects the hearer to agree with the statement preceding the tag. Therefore it will be said that tag questions have positive or negative presuppositions according as the statement which is tagged is positive or negative. Since the presupposition of a tag question is contained in the tagged statement, the question may be said to result from the questioning of that statement.

There are grammatical differences in the processes for the actual realization of the tag in English and Chinese. In English, the tag takes the appearance of a short question whose subject and verb are the subject and the auxiliary of the verb in the tagged sentence. For example:

You could come tomorrow, couldn't you?

or:

He hasn't spent all his money, has he?

(Note that if the statement is positive the tag is negative, and vice versa.)

For a negative non-disjunctive statement in English, there are two question correspondents, a negative question and a tag

question. This negative question has a generally "neutral" intonation. The same question can be given a different intonation which indicates a positive assumption rather than a negative one. There is a very wide range of subtle changes in intonation in all sorts of questions. These involve the general problem of stress or emphasis, which is not considered here. For a positive non-disjunctive statement there is a tag question. Thus, for the statement:

He went to Yale

there is the tag question:

He went to Yale, didn't he?

For the statement:

He didn't go to Yale

there is the negative question:

Didn't he go to Yale?

and the tag question:

He didn't go to Yale, did he?

As was mentioned above, the semantics of English and Chinese tags are the same. The Chinese tags differ in that they are of set forms that have no grammatical agreement with anything in the tagged sentence. Not all the tags can be used with any sentence, but whether it is possible to formulate grammatical restrictions is not yet clear. The tags include shì bu shì (是不是), "is not is," dùi bu dùi (對不對), "correct not correct," hǎo bu hǎo (好不好), "good not

good," and <u>xíng bu xíng</u> (行不行), "possible not possible."

77) You like dumplings very much, isn't that so?
Nǐ hěn xǐhuān chī jiǎozi, shì bu shì?
You very-much like eat dumplings, is not is?

78) She still hasn't changed clothes, isn't that right?
Tā hái méi huàn yīfu, duì bu duì?
She still not change clothes, correct not correct?

79) You drive the car, can you?
Nǐ kāi chē, xíng bu xíng?
You drive car, possible not possible?

80) As soon as he comes, we'll go shopping, all right?
Tā yi lái, wǒmen jiù qù mǎi dōngxi, hǎo bu hǎo?

81) *Nǐ hěn xǐhuān chī jiǎozi, hǎo bu hǎo?

In some treatments, <u>shì bu shì</u> is called an "interrogative construction" which may be placed at various positions in the same basic sentence. An example given in the <u>Modern Chinese Reader</u>[22] is:

82) Is it you that all live at the school?
Shì bu shì nǐmen dōu zhù zài xuéxiao lǐ?
Is not is you all live at school in?

83) You all live at the school, don't you?
Nǐmen dōu zhù zài xuéxiao lǐ, shì bu shì?
You all live at school in, is not is?

84) Don't you all live at the school?
Nǐmen shì bu shì dōu zhù zài xuéxiao lǐ?
You is not is all live at school in?

It is obvious from these examples that <u>shì bu shì</u> is not an interrogative form which can be placed at any of several positions. The first and third questions are A-not-A questions of

a sort, where shì emphasizes what follows it, i.e., for example, "Is it you who live at the school?" as opposed to someone else. Only in the second sentence is shì bu shì actually a tag.

The formation of a tag question in Chinese appears to involve simply the realization of the Q marker as one or the other of the tags. However, the tags themselves have the form of a sort of small A-not-A question, bù being the Chinese negative marker. That is to say, in the questions themselves, the tags appear to be single lexical units. On the other hand, it must be noted that the answer to a tag question is usually what may be called a "tag answer,"[23] i.e., (bù) shì (de), (bù) hǎo (de), (bù) dùi, or (bù) xíng. This indicates that the tags may have some structure of their own. It is still difficult to say what this might be.

There are in English at least two tag question types which offer some complication. These are the disjunctive tag, e.g.:

Who went, Tom or Dick?

and positive statements with a positive tag, e.g.:

You went, did you?

(This type is not possible with a negative statement. *"You didn't go, didn't you?") The circumstances under which the positive tag-positive statement question is used are difficult to state, even in general terms. In the disjunctive tag question, the disjuncts are read with list intonation, indicating

that it is assumed that one or the other of them is true.
So the presupposition of the above question is something like:

Someone went and it was either Tom or Dick.

Notice that there is also the question:

Who went, was it Tom or Dick?

which is semantically equivalent to:

Was it Tom or Dick who went?

This last question might be viewed as the questioning of the "cleft" sentence:

It was (either) Tom or Dick who went.

Therefore there may be a relationship between the question:

Was it Tom or Dick who went?

and:

Who went, (was it) Tom or Dick?

which may be viewed as a colloquial stylistic variation.

VI. QUESTION FORM AND ANSWER FORM

The answer forms which may be used as responses to the various question forms present some problems. The answer to a disjunctive question with different sentences is in both languages usually the repetition of one or the other of the disjuncts, e.g.:

85) Are you listening to Bach or to Beethoven?
Nǐ zài tīng Bāhā háishi Bèiduōfēn?
You ASP. listen Bach or Beethoven?

may be answered To Bach or Bèiduōfēn. The most common answer to a positive-negative disjunctive question in English is Yes or No with, optionally, an elliptical sentence. E.g.:

Yes, I am

or

No, I am not.

To an A-not-A question in Chinese, the commonest answer is a repetition of the verb phrase. Sometimes the positive tag answer is used with the positive disjunct, as:

86) Shìde, wǒ qù.
Yes, I go.

but the negative tag does not seem to be used with the negative disjunct.

Plain tag answers such as Yes or No may not be made to

positive-negative disjunctive questions where some part of the negative disjunct remains. To the equivalent questions where the negative disjunct has been entirely deleted, however, the plain tag responses may be made. For example:

87) Are you coming with me?
Nǐ gēn wǒ lái ma?
You with me come MA?

can be answered yes or no, or shìde or bùshìde. It should be mentioned that the Chinese answers to negative questions are reversed from the pattern in English. For example, the English question:

Aren't you coming with me?

may be answered:

Yes, I am

or:

No, I'm not.

To the equivalent Chinese question:

88) Nǐ bù gēn wǒ lái ma?
You not with me come MA?

the answer would be:

89) Yes, I am not coming with you
Shide, wǒ bù gēn nǐ lái
Yes, I not with you come

or:

90) No,I am coming with you.
Bùshìde, wǒ gēn nǐ lái.

It might be expected that if two questions are semantically and grammatically equivalent the answers that might be

made to them would also be the same. This does not appear to be the case, however. It might seem that, since we can say yes or no to "Are you coming?" and shìde or bùshìde to "Nǐ gēn wǒ lái ma?" these questions may actually have not neutral but positive presuppositions, that we are saying yes or no to the speaker's assumptions. Appearances here, however, contradict the native speaker's feelings about these questions, which is that they are both neutral. These relationships could perhaps be made more clear by means of the accompanying chart.

There are some comments which should be made about the diagram. The "VP" in the Chinese half of the chart is actually a sentence when used with the tag, that is, e.g., Qù, but Shìde, wǒ qù. In the English part, "Ellipsis" is in parentheses, whereas in the Chinese part "Tag" is in parentheses. This implies that in English, plain tags are the most common answers, and that in Chinese the repetition of the verb phrase is the most common. This appears to be the case; however, no definite statement is intended. In English, the use of an elliptical phrase alone as an answer, e.g., "I am" seems unnatural. It should be accompanied by the tag answer. In Chinese, the use of the verb phrase alone is quite common.

In questions with non-neutral presuppositions, English and Chinese differ in that English uses a positive tag when a positive statement is the answer, and a negative tag when a negative statement is the answer, regardless of whether these

statements contradict the assumption inherent in the question. Chinese uses tags to disagree or agree with the presumption.

ENGLISH

Positive
You are going.

Tag
You're going, aren't you?

Tag (+ Ellipsis)

Neutral
Either you are going
or you aren't going.

Disjunctive
Are you going
or aren't you
going?

Tag + Ellipsis

Deletion
Are you going?

Tag (+ Ellipsis)

Negative
You aren't going.

Tag
You aren't going,
are you?

Tag (+Ellipsis)

Negative
Aren't you going?

Tag (+Ellipsis)

CHINESE

Positive
Nǐ qù.

Tag
Nǐ qù, shì bu shì?

(Tag +) VP

Neutral
Nǐ huòzhe qù
huòzhe bù qù.

A-not-A
Nǐ qù bu qù?

(Pos. Tag +) VP

Deletion
Nǐ qù ma?

(Tag +) VP

Negative
Nǐ bù qù.

Tag
Nǐ bù qù,
shì bu shì?

(Tag +) VP

Negative
Nǐ bù qù ma?

(Tag +) VP

VII. CONCLUSION

This study has analysed the standard syntactic methods of forming questions in English and Mandarin Chinese. Using some of the results of recent investigations into the theory of grammar as working assumptions, analyses of interrogative structures were suggested which will conform to the restrictions which must be obeyed if we attempt to integrate a semantic description into the total description of a language.

Chinese and English both were found to have four different types of questions, namely, interrogative-word questions, disjunctive questions, tag questions and negative questions. "Yes-no" questions, e.g., "Are you going?" and some ma questions in Chinese are equivalent semantically and grammatically to positive-negative disjunctive questions. The semantic notion of the presupposition to a question was discussed in relation to each question type. The differences in the presuppositions for the various question types are illustrated below.

QUESTION WORD

	Question	Presupposition
	Who did it?	ΔNP did it.
	What did you see?	You saw Δ NP.
91)	Nǐ kànjiàn le shénme?	92) Nǐ kànjiàn le Δ NP.

DISJUNCTIVE

Question	Presupposition
Are you going or aren't you?	Either you are going or you aren't going.
93) Nǐ qù bù qù?	94) Nǐ huòzhe qù huòzhe bù qù.
Are you reading a book or a newspaper?	Either you are reading a book or you are reading a newspaper.
95) Nǐ kàn shū háishi kàn bào?	96) Nǐ huòzhe kàn shū huòzhe kàn bào.

TAG

Question	Presupposition
You're going, aren't you?	You're going.
97) Nǐ qù, shì bu shì?	98) Nǐ qù.
You're not going, are you?	You're not going.
99) Nǐ bù qù, shì bu shì?	100) Nǐ bù qù.

NEGATIVE

Question	Presupposition
Aren't you going?	You aren't going.
101) Nǐ bù qù ma?	102) Nǐ bù qù.

The use of the dummy symbol △ was suggested as a source for the interrogative words in both languages. It was suggested that the other question types result from the application of the question transformation to their underlying structures. Illustrations of what these structures might look like were given, but the details of the rules have yet to be worked out.

The use of intonation to form questions and the rôle of emphasis in questions has not been treated here. One point which should be mentioned is that emphasis in some types of questions may be used to indicate that the speaker has for some time assumed one thing about the situation, but that something has happened to cause him to change his mind. For example, if one asks the question "Aren't you going?" with emphasis on the word aren't, the implication is that one had assumed for some time previously that the person being asked the question was going, but that something in the more immediate situation indicates that this person is not actually going. Therefore it is a question whether the presupposition to the question is "You are going" or "You are not going." The immediate presupposition, the assumption actually motivating the question is "You are not going." The function of emphasis in this question might, however, be brought out more clearly if the presupposition is assumed to be positive. Questions such as these are obviously of considerable importance, and must be considered in any further work on the grammar of interrogation.

FOOTNOTES

[1]This model of grammar is due chiefly to Chomsky (1957).

[2]The Chinese examples are transcribed according to the Pīnyīn system of Romanization. The sentences are numbered to correspond to the character versions in the Appendix.

[3]Chao (1961), p. 59.

[4]Katz and Postal (1964), Chomsky (1964).

[5](1963), p. 39. The rule is given here in a somewhat modified form.

[6]Katz and Postal (1964), Chomsky (1964).

[7]Katz and Postal (1964), Chomsky (1964).

[8]Fillmore (1964a) offers a discussion of the importance of such processes.

[9](1961), pp. 58-59.

[10](1964).

[11](1964).

[12]Katz and Postal (1964), p. 93.

[13]Fillmore (1964a) notes that similarities between languages can best be discovered by analysing their deep structures.

[14]Fillmore (1964b) notes the difficulties which may occur in translation when a transformation may be applied to a deep structure in one language but not to the equivalent deep structure in another language.

[15]DE is a subordinating particle.

[16](1964).

[17](1964), pp. 79 ff.

[18](1964), p. 71.

[19](1964), p. 117.

[20]Lǔ (1957), p. 291; Wáng (1958), p. 452.

[21]This was pointed out by Professor William S-Y. Wang.

[22](1958), pp. 321-322.

[23]The term "tag answer" is used here to designate "yes," "no," "shide," etc. There is no specific connection with tag questions.

APPENDIX

1) 你到圖書館去還是不去？
2) 你去看電影還是去買東西？
3) 你忙不忙？
4) 他来了嗎？
5) 你現在回家是不是？
6) 你現在不回家嗎？
7) 誰請你吃飯？
8) 你看見了什么？
9) 你念了哪一本書？
10) 你念了什么書？
11) 桌子上有多少双筷子？
12) 你到哪儿去？
13) 他什么時候來了？
14) 你怎么寫那個字？
15) 他怎么樣？
16) 你為什么要在台灣念書？
17) 你跟一個從什么城來的人談了話？
18) *你認識說中國話的誰？
19) 說中國話的，你認得誰？
20) 他什么時候來還是一個問題
21) 你能不能告訴我他是誰？
22) 我不知道他是誰。

23) 誰都不來.
24) 他什么都不看.
25) 我什么都沒給他.
26) 連李先生都不來.
27) 他連報都不看.
28) 我連什么書都不要.
29) 他連報都看.
30) 我不看誰.
31) 他不要什么.
32) 我沒有什么書.
33) 有一些什么在外面.(?)
34) 他在吃什么東西.(?)
35) 誰在外面?
36) 你要什么?
37) 我想他跟什么人出去了.
38) 誰先來,誰先吃飯.
39) 我看見誰我就問他飯館在哪兒?
40) 什么便宜就買什么.
41) 有一個什么動物在外面.(?)
42) 那個什么動物在外面.
43) 有一個人來了.
44) 桌子上有一個東西.
45) 他出去了.
46) 過些時候.我就去看那本書.
47) 你看書還是看報?
48) 你要到銀行去還是你先生已經去取了錢了?

49) 你來不來？
50) 你來还是不来？
51) 你看書看報？
52) 你今天晚上去看電影还是不去看電影？
53) 你今天晚上去看電影还是不去？
54) 你去不去看電影？
55) 你去看電影嗎？
56) 你好。
57) 你好嗎？
58) 他看書了嗎？
59) *他还沒有來呢了。
60) 他明天看書嗎？
61) *他明天看書了。
62) 你不去嗎？
63) 你真的去嗎？
64) 你累不累？
65) 你累嗎？
66) 他会不会說中國話？
67) 他会說中國話嗎？
68) 你来不来啊？
69) 他来不来？
70) 他来嗎？
71) 你知道不知道他来不来？
72) 你知道不知道他来嗎？
73) 他来不来还是一個問題
74) *他来嗎还是一個問題

75) 你不去嗎？
76) 你不去.
77) 你很喜歡吃餃子是不是？
78) 他还没換衣服，對不對？
79) 你開車，行不行？
80) 他一来，我們就去買東西，好不好？
81) *你很喜欢吃餃子，好不好？
82) 是不是你們都住在學校裡？
83) 你們都住在學校裡是不是？
84) 你們是不是都住在學校裡？
85) 你在听巴哈还是貝多芬？
86) 是的，我去
87) 你跟我来嗎？
88) 你不跟我来嗎？
89) 是的，我不跟你来.
90) 不是的，我跟你来.
91) 你看見3什么？
92) 你看見3 △ Np.
93) 你去不去？
94) 你或者去或者不去.
95) 你看書还是看報？
96) 你或者看書或者看報.
97) 你去是不是？
98) 你去.
99) 你不去是不是？
100) 你不去.

101) 你不去嗎？
102) 你不去.

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